

Patent claims

1. A sealing arrangement (2, 28, 40, 47) which seals at least one radial interspace (21) between at least one inner bearing ring (3, 41, 52) and at least one outer bearing ring (5, 33, 42, 49), it being the case that the sealing arrangement (2, 28, 40, 47)

- is provided with at least a first support (17, 30, 43, 48a), the first support (17, 30, 43, 48a) bearing at least one elastic seal (18, 34, 39, 44, 51),

- has a second support (19, 32, 37, 45, 48b), the second support (19, 32, 37, 45, 48b) bearing at least one encoder (10) arranged outside the interspace (21), and the encoder (10) being oriented radially toward at least one sensor (14) arranged above the encoder (10) in the radially outward direction,

- has a dirt deflector (23, 31, 53) on the inner bearing ring (3, 41, 52), the dirt deflector (23, 31, 53) and the first support (17, 30, 43, 48a) being arranged such that they can be rotated relative to one another, and the seal (18, 34, 39, 44, 51) butting at least against the dirt deflector (23, 31, 53),

BEST AVAILABLE COPY

characterized in that the encoder engages around the inner bearing ring, and in that the encoder (10) is covered fully at least in the radial direction and at least partially in the axial direction by means of a covering element (20, 29, 48), the covering element (20, 29, 48) being rotationally fixed on one of the bearing rings (3, 5, 33, 41, 42, 49, 52).

2. The sealing arrangement as claimed in claim 1, characterized in that the covering element (20, 29, 48) at least partially covers the seal (18, 34, 39, 44, 51).

3. The sealing arrangement as claimed in claim 1, characterized in that the covering element (20, 29, 48) is formed integrally with the first support (17, 30, 48a) made of sheet metal.

4. The sealing arrangement as claimed in claim 3, characterized in that the covering element (20) is fixed on a radially outer surface section (5a) of the outer bearing ring (5).

5. The sealing arrangement as claimed in claim 3, characterized in that the covering element (29, 48) is fixed on an inner surface of the outer bearing ring (33, 49).

6. The sealing arrangement as claimed in either of claims 4 and 5, characterized in that, starting from the outer bearing ring (5, 33, 49), the covering element (20, 29, 48) first of all extends axially away from the outer bearing ring (5, 33, 49) and radially between the sensor (14) and the encoder (10), and covers the encoder (10) in the radial

direction in the process, in that the covering element (20, 29, 48) then extends radially inward and covers the encoder (10) and the interspace (21) in the axial direction in the process, and in that the covering element (20, 29, 48), finally, extends axially in the direction of rolling bodies (6) and accommodates the seal (18, 34, 51).

7. The sealing arrangement as claimed in claim 1, characterized in that the covering element (48) is formed integrally with the second support (48b).

8. The sealing arrangement as claimed in claim 1, characterized in that the dirt deflector (23, 31) and the second support (19, 32) are formed in one piece from sheet metal.

9. The sealing arrangement as claimed in claim 8, characterized in that, starting from the dirt deflector (23, 31), and arranged radially between the seal (18, 34) and the inner bearing ring (3, 52), the second support (19, 32) is first of all oriented axially in the direction of rolling bodies (6) and then runs radially outward away from the inner bearing ring (3, 52), between the rolling bodies (6) and the seal (18, 34), and in that the second support (19, 32), finally, is oriented axially in the direction of the covering element (20, 29) and has the encoder (10).

10. The sealing arrangement as claimed in claim 1, characterized in that the dirt deflector and the covering element (46) are formed in one piece.

11. The sealing arrangement as claimed in claim 10, characterized in that the covering element (46) first of all is seated firmly on the inner bearing ring (41) and then extends radially outward from the inner bearing ring (41), the covering element (46) engaging partially around the outer bearing ring (42) in the radially outward direction, it being spaced apart radially from the outer bearing ring (42).

12. The sealing arrangement as claimed in claim 10, characterized in that the encoder (10) is arranged radially between the outer bearing ring (42) and the covering element (46).

13. The sealing arrangement as claimed in either of claims 1 and 12, characterized in that the encoder (10) is fixed on the outer bearing ring (42) in the radially outward direction.

14. The sealing arrangement as claimed in claim 1, characterized in that the seal (18, 34, 44, 51) butts axially against the dirt deflector (23, 31, 53) by way of at least one sealing lip (22, 34a, 44b, 44c, 51c).

15. The sealing arrangement as claimed in claim 1, characterized in that the seal (18, 34, 39, 51) butts radially against the dirt deflector (23, 31, 53) by way of at least one sealing lip (22, 34b, 34c, 51b).

16. The sealing arrangement as claimed in claim 1, characterized in that the seal (44, 51) butts directly against the inner bearing ring (41, 52) by way of at least

one sealing lip (44d, 51a).

17. The sealing arrangement as claimed in claim 1,
characterized in that the seal (18, 34) and the dirt
deflector (23, 31) enclose between them an annular cavity
(25, 35, 36) filled with a lubricating grease.